| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/852,981 | 05/10/2001 | Stephen D. Heizer | COMP:0201/VAN P00-3228 | 4897 |

|  |  |
|---|---|
| 7590      08/13/2004 | EXAMINER |
| LEGAL DEPARTMENT M/S 35 P.O. BOX 272400 FT. COLLINS, CO 80527 | LEFKOWITZ, SUMATI |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2112 |  |

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | **Application No.** | **Applicant(s)** |
|---|---|---|
| **Office Action Summary** | 09/852,981 | HEIZER ET AL. |
| | **Examiner** | **Art Unit** | |
| | Sumati Lefkowitz | 2112 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on <u>06 May 2004</u>.

2a) ☒ This action is **FINAL.**      2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) <u>1-37</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-37</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)         Paper No(s)/Mail Date. _____ .
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)    5) ☐ Notice of Informal Patent Application (PTO-152)
      Paper No(s)/Mail Date _____ .         6) ☐ Other: _____ .

## DETAILED ACTION

1.      Claims 1-37 are pending.

### *Claim Rejections - 35 USC § 102*

2.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

3.      Claims 1, 2, 4, 6, 8, 10, 11, 13, 15, 18, 19, 23, 27, and 29-31 are rejected under 35

U.S.C. 102(e) as being anticipated by Bailis et al., 6,434,652 (hereinafter Bailis).

        a.      As to claims 1, 2, 4, 6, 8, 10, 11, 13, 15, 18, 19, 23, 27, and 29-31, Bailis discloses

{1}: a processor-based device (i.e., processor base system 10) comprising a power supply (i.e.,

power supply 12) to generate power for the processor-based device, a peripheral connector (i.e.,

card connector socket 3) to connect to a peripheral device (i.e., hot plugged card 2) and a control

circuit (i.e., hot plug subsystem 16) coupled to the power supply and the peripheral connector,

the control circuit being configured to control application of power from the power supply to the

peripheral device when the peripheral device is connected to the peripheral connector while the

power supply is generating power (note column 2, line 43 – column 3, line 10 and abstract),

wherein the control circuit (i.e., hot plug subsystem 16) comprises a first plurality of devices

(i.e., card power switch 6 and hot plug controller 9) configured to gradually apply power to the

peripheral device (note column 5, lines 6-21), and a second plurality of devices (i.e., card power

good sensor 7 and hot plug controller 9) configured to monitor voltage applied to the peripheral

device from the power supply and to enable access from the processor-based device to the

peripheral device when the voltage reaches a predetermined threshold (note column 5, lines 21-

27 and column 7, line 1 – column 8, line 22, wherein the enabling of the card bus switch 4 to

allow for the connection of the box signal bus and the card signal bus reads on enabling access

from the processor-based device, i.e., box, to the peripheral device, i.e., card), {2}: wherein the

control circuit is configured to disable access from the processor-based device to the peripheral

device until voltage applied to the peripheral device from the power supply reaches a

predetermined threshold (i.e., if card power is good), (note column 2, line 57 - column 3, line 3

and column 7, lines 4-12 and column 7, line 59 – column 8, line 22, wherein the fact that the card

bus switch is not enabled until the card power is determined to be good reads on disabling access

to the inserted peripheral device until the voltage on the peripheral device reaches a threshold

and enabling access to the peripheral device when the voltage does reach the predetermined

threshold), {4, 27}: wherein the control circuit receives a signal (i.e., card present signal) from

the peripheral device when the peripheral connector is connected to the peripheral device (note

column 7, lines 20-28) and wherein the control circuit is configured to control application of

power to the peripheral device in response to the signal (note column 7, line 40 – column 8, line

22), {6}: comprising a processor in communication with the control circuit (note column 3, line

62 – column 4, line 14), wherein the processor-based device is a {8, 19, 29}: desktop computer,

or a {10, 30}: server, or an 11: Internet appliance (note column 3, lines 26-29), and further

discloses {13}: a method for hot-plugging a peripheral device to a processor-based device, the

method comprising the acts of detecting connection of a peripheral device to a processor-based

device while the processor-based device is powered and gradually applying power from the

processor-based device to the peripheral device in response to detecting connection (note column

5, lines 5-21 and column 7, line 40 – column 8, line 22), monitoring voltage applied to the

peripheral device while gradually applying power and enabling access from the processor-based

device to the peripheral device when the monitored voltage reaches a predetermined threshold

(note column 5, lines 21-27 and column 7, line 1 – column 8, line 22, wherein the enabling of the

card bus switch 4 to allow for the connection of the box signal bus and the card signal bus reads

on enabling access from the processor-based device, i.e., box, to the peripheral device, i.e., card),

{15}: comprising the act of monitoring the voltage applied to the peripheral device while

controlling application of power and prohibiting access from the processor based device to the

peripheral device until the monitored voltage reaches a predetermined threshold (note column 2,

line 57 - column 3, line 3 and column 7, lines 4-12 and column 7, line 59 – column 8, line 22,

wherein the fact that the card bus switch is not enabled until the card power is determined to be

good reads on disabling access to the inserted peripheral device until the voltage on the

peripheral device reaches a threshold and enabling access to the peripheral device when the

voltage does reach the predetermined threshold), {18}: comprising the act of connecting the

peripheral device to the processor based device (note column 7, lines 20-28).

      b.     As to claim 23, the claim limitations have already been discussed with respect to

claims 1 and 13 above, with the exception of first and second peripheral connectors. Bailis

discloses a first and second peripheral connectors (i.e.,. connector section 2' and connector

socket 3, respectively).

## *Claim Rejections - 35 USC § 103*

4.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.      Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park,

6,308,233 in view of Bailis et al., 6,434,652 (hereinafter Bailis).

As to claims 1 and 2, Park discloses {1}:a main device comprising a power supply (i.e.,

Vcc of column 3, lines 15-17) to generate power for the main device, a peripheral connector (i.e.,

inherent to insertion/extraction of board into system) to connect to a peripheral device (i.e.,

board) and a control circuit (i.e., circuit of Figure 1) coupled to the power supply and the

peripheral connector, the control circuit being configured to control application of power from

the power supply to the peripheral device when the peripheral device is connected to the

peripheral connector while the power supply is generating power (note column 2, lines 12-18 and

column 3, lines 10-65), wherein the control circuit comprises a first plurality of devices (i.e., devices responsible for gradually applying power to the peripheral) configured to gradually apply power to the peripheral device (note column 3, lines 15-54) and a second plurality of devices (i.e., devices responsible for monitoring voltage) configured to monitor voltage applied to the peripheral device from the power supply and to enable access from the main device to the peripheral device when the voltage reaches a predetermined threshold (note column 3, lines 15-65), {2}:wherein the control circuit is configured to disable access from the main device to the peripheral device until voltage applied to the peripheral device from the power supply reaches a predetermined threshold (note column 2, lines 12-18 and column 3, lines 10-65), wherein the control circuit is configured to monitor voltage applied to the peripheral device from the power supply and to enable access from the main device to the peripheral device when the voltage reaches a predetermined threshold (note column 2, lines 12-18 and column 3, lines 10-65).

Park fails to disclose that the main device is a processor-based device.

Bailis discloses that the main device is a processor-based device (i.e., processor base system 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a processor-based device, as Bailis teaches, in the system of Park so as to allow intelligent, processor-based devices to interface with hot plugged devices.

6.      Claims 3, 14, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailis et al., 6,434,652 (hereinafter Bailis) in view of what was well known in the art, as

exemplified by any one of Hamano et al., 6,178,474 (hereinafter Hamano), Van Wonterghem, 5951660 and Clemo, 5714,809.

As to claims 3, 14, and 26, Bailis discloses gradually applying power from the processor-based device to the peripheral device (note column 5, lines 6-27), but fails to disclose that the first plurality of devices comprises one or more high frequency filters or filtering noise from being delivered from the processor-based device to the peripheral.

Examiner takes Official Notice that filtering high frequency noise or transients from a main unit to a peripheral unit during hot insertion of the peripheral unit into the main unit using low pass filters comprising capacitive circuits is well known in the art of hot insertion, evidence of which may be found in:

| | |
|---|---|
| Hamano: | column 5, lines 9-61, column 6, lines 24-33, column 7, lines 27-31 |
| Van Wonterghem: | column 6, lines 4-27, column 14, lines 7-51, column 16, lines 19-32, column 18, line 64 – column 19, line 6 |
| Clemo: | column 3, line 63 – column 4, line 14 |

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of filters to filter out high frequency transients from reaching a peripheral unit from a main unit since filters provide an inexpensive and reliable means of filtering noise from a main unit and thereby prevent a peripheral unit from becoming damaged during insertion into the main unit, as Hamano, Van Wonterghem and Clemo teach in the above cited passages.

7.      Claims 5, 7, 9, 12, and 20-22, 28, and 32-37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bailis et al., 6,434,652 (hereinafter Bailis) in view of Falkenburg et al.,

6,311,242 (hereinafter Falkenburg).

As to claims 5, 7, 9, 12, and 20-22, 28, and 32-37, Bailis fails to disclose that the power

supply comprises a battery or that the processor based device is a PDA or laptop or cell phone or

that the peripheral device is an option pack or storage device or hard drive or modem.

Falkenburg discloses portable, processor-based devices, which include PDAs, laptops and

cell phones, that allow for hot plugging of peripheral devices (note column 2, lines 4-18) and that

the power supply for supplying power to the inserted peripheral device is a battery (wherein it is

inherent that the power supply of a portable device would be some kind of battery since the

device is portable).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to employ the use of a portable processor based device and its respective battery, as Falkenburg

teaches, in the system of Bailis so as to allow for greater mobility and convenience in the use and

transport of the processor-based device.

Falkenburg also discloses that the peripheral device is an option pack or storage device or

hard drive or modem (note column 1, lines 41-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to have the peripheral device be an option pack or storage device or hard drive or modem, as

Falkenburg teaches, in the system of Bailis so as to expand the capabilities of the processor-

based device.

8.      Claims 16, 17, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bailis et al., 6,434,652 (hereinafter Bailis) in view of Clemo, 5,714,809.

As to claims 16, 17, 24, and 25, Bailis fails to disclose that the act of controlling

application of power comprises the act of limiting rise of voltage applied to the peripheral device

from the processor based device or limiting rise of current supplied from the processor based

device to the peripheral device.

Clemo discloses that the act of controlling application of power comprises the act of

limiting rise of voltage and current applied to the peripheral device (note column 11, line 39 –

column 12, line 40).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to limit the rise of current and voltage to the peripheral device, as Clemo teaches, in the system

of Bailis so as to minimize damage to the peripheral device caused by current/voltage surges and

spikes.

### *Response to Arguments*

9.      Applicant's arguments with respect to the claims have been considered but are moot in

view of the new ground(s) of rejection.

### *Conclusion*

10.     Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

11.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sumati Lefkowitz whose telephone number is 703-308-7790.

The examiner can normally be reached on Monday-Friday from 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

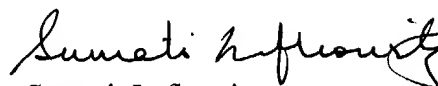supervisor, Mark Rinehart can be reached at 703-305-4815.

The fax phone numbers for the organization where this application or proceeding is

assigned are:

  703-872-9306          for Official communications

  703-746-5661          for Non-Official/Draft communications

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.


Sumati Lefkowitz
Primary Examiner
Art Unit 2112


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August 10, 2004